

U.S. Patent Appl. No.: 09/935,757 Mockel et al.

III. AMENDMENTS TO THE CLAIMS

1-8. (Canceled)

9. (Currently Amended) A process for the production of an L-amino acid comprising:

a) culturing a coryneform bacterium under conditions suitable for overexpression of the sigE gene having the nucleic acid sequence as set forth in SEQ ID NO: 1 ~~and encoding a polypeptide having an amino acid sequence as set forth in SEQ ID NO: 2;~~

~~b) enriching the medium or the cells of the bacterium; and~~

e)(b) isolating the L-amino acid,

wherein overexpression occurs by increasing the copy number of said gene or operatively linking said gene to a promoter.

10-11. (Canceled)

12. (Currently Amended) ~~A~~ The process according to claim 9, wherein said coryneform bacteria have been transformed with a plasmid vector which comprises the nucleotide sequence of SEQ ID NO: 1.

13-14. (Canceled)

15. (Currently Amended) The process according to claim 9, ~~wherein in a C. glutamicum strain, one or more of the~~ further comprising overexpressing a C. glutamicum genes gene selected from the group consisting of is overexpressed:

(a) ~~the dapA~~ a gene which codes for dihydrodipicolinate synthase,

(b) ~~the gap~~ a gene which codes for glyceraldehyde 3-phosphate dehydrogenase,

(c) ~~the tpi~~ a gene which codes for triose phosphate isomerase,

(d) ~~the pgk~~ a gene which codes for 3-phosphoglycerate kinase,

(e) ~~the zwf~~ a gene which codes for glucose 6-phosphate dehydrogenase,

(f) ~~the pye~~ a gene which codes for pyruvate carboxylase,

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- (g) ~~the mae~~ a gene which codes for malate-quinone oxidoreductase,
- (h) ~~the lysC~~ a gene which codes for aspartate kinase,
- (i) ~~the lysE~~ a gene ~~coding~~ which codes for a protein for lysine export that exports lysine,
- (j) ~~the hem~~ a gene which codes for homoserine dehydrogenase,
- ~~(j)(k)~~ ~~the ilvA~~ a gene which codes for threonine dehydratase,
- ~~(k)(l)~~ ~~the ilvBN~~ a gene which codes for acetohydroxy-acid synthase, and
- ~~(l)(m)~~ ~~the ilvD~~ a gene which codes for dihydroxy-acid dehydratase. and
- ~~(m)~~ ~~the zwal~~ a gene which codes for the Zwal protein.

16. (Currently Amended) ~~A process as claimed in claim 9~~ The process according to claim 9, further comprising deleting a wherein in a *C. glutamicum* strain, one or more of the *C. glutamicum* genes gene selected from the group is deleted consisting of:

- (a) ~~the pek~~ a gene which codes for phosphoenol pyruvate carboxykinase,
- (b) ~~the pgi~~ a gene which codes for glucose 6-phosphate isomerase, and
- (c) ~~the pexB~~ a gene which codes for pyruvate oxidase. and
- ~~(d) the zwa2 a gene which codes for the Zwa2 protein.~~

17. (Canceled)

18. (Currently Amended) ~~A~~ The process according to claim 9, wherein said coryneform bacteria are of the species *Corynebacterium glutamicum*.

19-20. (Canceled)

21. (Previously Presented) The process according to claim 9, wherein said L-amino acid is L-lysine.

22. (Currently Amended) ~~The process according to claim 9, wherein said nucleotide sequence comprises~~ A process for the production of an L-amino acid comprising:

- (a) culturing a coryneform bacteria under conditions suitable for overexpression of a nucleic acid comprising nucleotides 302 to 949 of SEQ ID NO: 1; and
- (b) isolating the L-amino acid

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wherein overexpression occurs by increasing the copy number of said nucleic acid or operatively linking said nucleic acid to a promoter.

23. (Currently Amended) A process for producing L-amino acids comprising:

a) transforming a coryneform bacterium with a vector which includes a sigE gene having the polynucleotide sequence of SEQ ID NO: 1, wherein said sigE gene ~~is under control of a promoter which allows the overexpression of~~ is overexpressed by increasing the copy number or operatively linking said sigE gene with a promoter;

b) culturing said bacterium in a medium suitable for expression of the sigE gene to thereby produce L-amino acids; and

c) isolating the L-amino acids.

24. (Currently Amended) A method for the preparation of L-amino acids, comprising:

culturing coryneform bacteria, which include an overexpressed sigE gene having a polynucleotide sequence which encodes the amino acid sequence of SEQ ID NO: 2, in a medium suitable for the expression of sigE to thereby produce L-amino acids wherein overexpression of the sigE gene is accomplished by increasing the copy number of said gene or operatively linking said gene to a promoter.

25. (Previously Presented) The method according to claim 24, further comprising isolating the L-amino acids.

26. (Previously Presented) The method according to claim 24, wherein the bacteria have been transformed with a plasmid vector which comprises the nucleotide sequence of SEQ ID NO: 1.

27. (Previously Presented) The method according to claim 24, wherein the coryneform bacteria produce L-lysine.

28. (Currently Amended) A The method according to claim 24, wherein the bacteria are *Corynebacterium glutamicum*.

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29. (New) The method according to claim 24, further comprising overexpressing a *C. glutamicum* gene selected from the group consisting of:

- (a) a gene which codes for dihydrodipicolinate synthase,
- (b) a gene which codes for glyceraldehyde 3-phosphate dehydrogenase,
- (c) a gene which codes for triose phosphate isomerase,
- (d) a gene which codes for 3-phosphoglycerate kinase,
- (e) a gene which codes for glucose 6-phosphate dehydrogenase,
- (f) a gene which codes for pyruvate carboxylase,
- (g) a gene which codes for malate-quinone oxidoreductase,
- (h) a gene which codes for aspartate kinase,
- (i) a gene which codes for a protein that exports lysine,
- (j) a gene which codes for homoserine dehydrogenase,
- (k) a gene which codes for threonine dehydratase,
- (l) a gene which codes for acetohydroxy-acid synthase, and
- (m) a gene which codes for dihydroxy-acid dehydratase.

30. (New) The method according to claim 24, further comprising deleting a *C. glutamicum* gene selected from the group consisting of:

- (a) a gene which codes for phosphoenol pyruvate carboxykinase;
- (b) a gene which codes for glucose 6-phosphate isomerase; and
- (c) a gene which codes for pyruvate oxidase.